

## Department of Energy

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heaters) which is intended to be recessed in or surface mounted on walls, which transfers heat by radiation and/or convection (either natural or forced) and which includes forced convectors, natural convectors, radiant heaters, high wall or valance heaters.

*Water closet* means a plumbing fixture that has a water-containing receptor which receives liquid and solid body waste, and upon actuation, conveys the waste through an exposed integral trap seal into a gravity drainage system, except such term does not include fixtures designed for installation in prisons.

*Water heater* means a product which utilizes oil, gas, or electricity to heat potable water for use outside the heater upon demand, including—

(a) Storage type units which heat and store water at a thermostatically controlled temperature, including gas storage water heaters with an input of 75,000 Btu per hour or less, oil storage water heaters with an input of 105,000 Btu per hour or less, and electric storage water heaters with an input of 12 kilowatts or less;

(b) Instantaneous type units which heat water but contain no more than one gallon of water per 4,000 Btu per hour of input, including gas instantaneous water heaters with an input of 200,000 Btu per hour or less, oil instantaneous water heaters with an input of 210,000 Btu per hour or less, and electric instantaneous water heaters with an input of 12 kilowatts or less; and

(c) Heat pump type units, with a maximum current rating of 24 amperes at a voltage no greater than 250 volts, which are products designed to transfer thermal energy from one temperature level to a higher temperature level for the purpose of heating water, including all ancillary equipment such as fans, storage tanks, pumps, or controls necessary for the device to perform its function.

*Water use* means the quantity of water flowing through a showerhead, faucet, water closet, or urinal at point of use, determined in accordance with test procedures under Appendices S and T of subpart B of this part.

*Weatherized warm air furnace or boiler* means a furnace or boiler designed for installation outdoors, approved for re-

sistance to wind, rain, and snow, and supplied with its own venting system.

[42 FR 27898, June 1, 1977]

EDITORIAL NOTE: For Federal Register citations affecting § 430.2, see the List of CFR Sections Affected in the Finding Aids section of this volume.

EFFECTIVE DATE NOTE: At 62 FR 23115, Apr. 28, 1997, § 430.2 was amended by adding a definition for *Compact refrigerator/refrigerator-freezer/freezer* effective July 1, 2001.

EFFECTIVE DATE NOTE: At 62 FR 50148, Sept. 24, 1997, § 430.2 was amended by adding definitions for *Casement-only* and *Casement-slider* effective Oct. 1, 2000.

### Subpart B—Test Procedures

#### § 430.21 Purpose and scope.

This subpart contains test procedures required to be prescribed by DOE pursuant to section 323 of the Act.

#### § 430.22 Reference Sources.

(a) *Materials incorporated by reference.*—(1) *General.* The following standards which are not otherwise set forth in Part 430 are incorporated by reference and made a part of Part 430. The standards listed in this section have been approved for incorporation by reference by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. The specified versions of the standards are incorporated, and any subsequent amendment to a standard by the standard-setting organization will not affect the DOE test procedures unless and until those test procedures are amended by DOE.

(2) *Availability of standards.* The standards incorporated by reference are available for inspection at:

(i) Office of the Federal Register Information Center, 800 North Capitol Street, NW., Suite 700, Washington, DC.

(ii) U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Hearings and Dockets, Forrestal Building, 1000 Independence Ave, SW, Washington, DC 20585.

(b) *List of Sources and Standards Incorporated by Reference.*

(1) American National Standards Institute (ANSI). The ANSI standards

listed in this paragraph may be obtained from the American National Standards Institute, 1430 Broadway, New York, NY 10018, (212) 642-4900.

1. ANSI C78.1-1991, "for Fluorescent Lamps—Rapid-Start Types—Dimensional and Electrical Characteristics"
2. ANSI C78.2-1991, "for Fluorescent Lamps—Preheat-Start Types—Dimensional and Electrical Characteristics of Fluorescent Lamps"
3. ANSI C78.3-1991, "for Fluorescent Lamps—Instant-Start and Cold-Cathode Types—Dimensional and Electrical Characteristics"
4. ANSI C78.375-1991, "for Fluorescent Lamps—Guide for Electrical Measurements"
5. ANSI C82.3-1983 "for Reference Ballasts for Fluorescent Lamps"
6. ANSI C79.1-1994, "Nomenclature for Glass Bulbs—Intended for Use with Electric Lamps"
7. ANSI C78.21-1989, "Incandescent Lamps—PAR and R Shapes"

(2) Illuminating Engineering Society of North America (IESNA). The IESNA standards listed in this paragraph may be obtained from the Illuminating Engineering Society of North America, 120 Wall Street, Floor 17, New York, NY 10005-4001, (212) 248-5000.

1. Illuminating Engineering Society LM-9-88, "IES Approved Method for the Electrical and Photometric Measurements of Fluorescent Lamps"
2. Illuminating Engineering Society of North America LM-16-1993, "IESNA Practical Guide to Colorimetry of Light Sources"
3. Illuminating Engineering Society of North America LM-20-1994, "IESNA Approved Method for Photometric Testing of Reflector-Type Lamps"
4. Illuminating Engineering Society of North America LM-45-91, "IES Approved Method for Electrical and Photometric Measurements of General Service Incandescent Filament Lamps"
5. Illuminating Engineering Society of North America LM-58-1994, "IESNA Guide to Spectroradiometric Measurements"
6. Illuminating Engineering Society of North America LM-66-1991, "IES Approved Method for the Electrical and Photometric Measurements of Single-Ended Compact Fluorescent Lamps"
7. *Illuminating Engineering Society of North America Lighting Handbook, Reference and Application*, 8th Edition, 1993, Chapter 6, Light Sources

(3) International Commission on Illumination (CIE). The CIE standards listed in this paragraph may be obtained

from the International Commission on Illumination, CIE Bureau Central, Kegelgasse 27, A-1030, Vienna, Austria. CIE publications are also available from TLA Lighting Consultants, 7 Pond Street, Salem, MA 10970, (508) 745-6870.

1. International Commission on Illumination (CIE) Publication No. 13.2 1974, corrected reprint 1993, "Method of Measuring and Specifying Color Rendering Properties of Light Sources," ISBN 3 900 734 39 9

(4) International Electrotechnical Commission. Copies of the International Electrotechnical Commission Publications can be obtained from the American National Standards Institute, 11 West 42nd Street, New York, New York 10036, (212) 642-4936.

1. IEC 705, "Methods for Measuring the Performance of Microwave Ovens for Household and Similar Purposes," Section 4, Methods of Measurement, Paragraph 13 "Electrical Power Input Measurement," and Paragraph 14 "Efficiency" (1988).
2. IEC 705, Amendment 2, "Methods for Measuring the Performance of Microwave Ovens for Household and Similar Purposes," Section 4, Methods of Measurement, Paragraph 12 "Microwave Power Output Measurement" (1993).

(5) American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc., Publication Sales, 1791 Tullie Circle, NE, Atlanta, GA 30329, (1-800-5-ASHRAE).

1. American National Standards Institute/American Society of Heating, Refrigerating, and Air-Conditioning Engineers Standard 103-1993, "Methods of Testing for Annual Fuel Utilization Efficiency of Residential Central Furnaces and Boilers," (with Errata of October 24, 1996) except for sections 3.0, 7.2.2.5, 8.6.1.1, 9.1.2.2, 9.5.1.1, 9.5.1.2.1, 9.5.1.2.2, 9.5.2.1, 9.7.1, 10.0, 11.2.12, 11.3.12, 11.4.12, 11.5.12 and appendices B and C.
2. American National Standards Institute Standard Z21.56-1994, "Gas-Fired Pool Heaters," section 2.9.

(6) American Society of Mechanical Engineers (ASME). The ASME standards listed in this paragraph may be obtained from the American Society of Mechanical Engineers, Service Center, 22 Law Drive, P.O. Box 2900, Fairfield, NJ 07007.

1. ASME/ANSI Standard A112.18.1M-1996, "Plumbing Fixture Fittings."

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2. ASME/ANSI Standard A112.19.6-1995, "Hydraulic Requirements for Water Closets and Urinals."

(c) *Reference Standards.* (1) *General.* The standards listed in this paragraph are referred to in the DOE test procedures and elsewhere in 10 CFR part 430 but are not incorporated by reference. These sources are given here for information and guidance.

(2) *List of References.*

1. National Voluntary Laboratory Accreditation Program Handbook 150-01, "Energy Efficient Lighting Products, Lamps and Luminaires, August 1993." National Voluntary Laboratory Accreditation Program, NIST, Gaithersburg, MD.

2. "Illuminating Engineering Society Lighting Handbook," 8th Edition, New York, NY 1993.

[59 FR 49474, Sept. 28, 1994, as amended at 62 FR 29239, May 29, 1997; 62 FR 51981, Oct. 3, 1997; 63 FR 13316, Mar. 18, 1998]

### § 430.23 Test procedures for measures of energy and water consumption.

(a) *Refrigerators and refrigerator-freezers.* (1) The estimated annual operating cost for electric refrigerators and electric refrigerator-freezers without an anti-sweat heater switch shall be the product of the following three factors: (i) The representative average-use cycle of 365 cycles per year, (ii) the average per-cycle energy consumption for the standard cycle in kilowatt-hours per cycle, determined according to 6.2 (6.3.6 for externally vented units) of appendix A1 of this subpart, and (iii) the representative average unit cost of electricity in dollars per kilowatt-hour as provided by the Secretary, the resulting product then being rounded off to the nearest dollar per year.

(2) The estimated annual operating cost for electric refrigerators and electric refrigerator-freezers with an anti-sweat heater switch shall be the product of the following three factors: (i) The representative average-use cycle of 365 cycles per year, (ii) half the sum of the average per-cycle energy consumption for the standard cycle and the average per-cycle energy consumption for a test cycle type with the anti-sweat heater switch in the position set at the factory just prior to shipping, each in kilowatt-hours per cycle, determined according to 6.2 (6.3.6 for externally

vented units) of appendix A1 of this subpart, and (iii) the representative average unit cost of electricity in dollars per kilowatt-hour as provided by the Secretary, the resulting product then being rounded off to the nearest dollar per year.

(3) The estimated annual operating cost for any other specified cycle type for electric refrigerators and electric refrigerator-freezers shall be the product of the following three factors: (i) The representative average-use cycle of 365 cycles per year, (ii) the average per-cycle energy consumption for the specified cycle type, determined according to 6.2 (6.3.6 for externally vented units) of appendix A1 to this subpart, and (iii) the representative average unit cost of electricity in dollars per kilowatt-hour as provided by the Secretary, the resulting product then being rounded off to the nearest dollar per year.

(4) The energy factor for electric refrigerators and electric refrigerator-freezers, expressed in cubic feet per kilowatt-hour per cycle, shall be—

(i) For electric refrigerators and electric refrigerator-freezers not having an anti-sweat heater switch, the quotient of (A) the adjusted total volume in cubic feet, determined according to 6.1 of appendix A1 of this subpart, divided by (B) the average per-cycle energy consumption for the standard cycle in kilowatt-hours per cycle, determined according to 6.2 (6.3.6 for externally vented units) of appendix A1 of this subpart, the resulting quotient then being rounded off to the second decimal place, and

(ii) For electric refrigerators and electric refrigerator-freezers having an anti-sweat heater switch, the quotient of (A) the adjusted total volume in cubic feet, determined according to 6.1 of appendix A1 of this subpart, divided by (B) half the sum of the average per-cycle energy consumption for the standard cycle and the average per-cycle energy consumption for a test cycle type with the anti-sweat heater switch in the position set at the factory just prior to shipping, each in kilowatt-hours per cycle, determined according to 6.2 (6.3.6 for externally vented units) of appendix A1 of this subpart, the resulting quotient then being